HOW ART TEACHERS' INTERNET INTEGRATION TRAINING AND CONFIDENCE LEVELS EFFECT THE TEACHERS' PERCEPTIONS OF RESULTING STUDENT PERFORMANCE

By

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ABSTRACT

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How Art Teachers' Internet Integration Training and Confidence Levels Affect the Teachers' Perceptions of Resulting Student Performance

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This study of art teacher perceptions of student educational performance along with art teacher training and confidence levels in relation to Internet integration focused on the following objectives to determine:

- **the percentage of art teachers that have received Internet training.**
- **the percentage of art teachers that have received Internet integration training.**
- **what percentage of art teachers feel confident in their ability to use Internet technology.**
- **if integration of the Internet into art classrooms improves teacher satisfaction.**
- **if art teachers perceive integration of the Internet into art classrooms improves student satisfaction.**

The surveys were sent to art teachers in the Cooperative Educational Service Agency (C.E.S.A) 10 area of Wisconsin. The teachers consisted of full and part-time educators with teaching levels from kindergarten through grade 12. Participants of the study were given a brief description of the purpose of the questionnaire through an introductory letter. Directions were given to teachers on how to complete the questionnaire and return it using the enclosed self-addressed, stamped envelope.

Overall, the survey information showed that Internet training was related to increased positive perceptions of satisfaction levels by C.E.S.A 10 art teachers. Internet training also had a positive impact on teacher confidence levels. The teachers that stated they had received some type of Internet training displayed a higher rate of positive responses than those without training.

The survey also showed C.E.S.A. 10 art teachers who were confident in their ability to use the Internet as an instructional tool had higher rates of positive responses in the area of student satisfaction. These teachers also had lower rates of negative responses than those with lower confidence. There was not a positive relationship between how confident teachers perceived student and teacher satisfaction in their classrooms. Many unconfident teachers are still undecided about how they perceived student and teacher satisfaction.

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CHAPTER 1

INTRODUCTION

Human beings from early prehistoric times have continually sought and have found ways to transfer information from one individual to another and between groups. Civilization slowly moved from inaudible speech, hand signals, and cave drawings to clay tablets and parchment. Basic printing presses followed and human civilization became part of the information age. Computers and now the Internet are the worlds' latest additions. There can be no doubt these high-tech tools, available today, have an effect on almost everyone's lives, be it good or bad, and will continue to effect our lives in numerous ways in the future.

Is this new technology something that could be beneficial to our nations' school children? Doyle (1999) states "What this portends is an open guess at this point, but it seems to me that humankind will advance tremendously as access to information spurs the active engagement of students worldwide". According to Greh (1997) "Technology is slow to find its way into any classroom, not just the art room".

Traditionally art education has dealt with creative manipulation of many visual elements and principals. Clay, paper, paint, charcoal, pastels and numerous other supplies

are familiar to art educators. Computers and, in particular, the Internet, or World Wide Web, seem very foreign. "Even the word "computer" connotes that these techno-boxes are best suited for rapid number crunching" (Matthews, 1997). Best used in math and science class, certainly not art. Computer technology may have once been considered an enemy of art programs, because of the dehumanization factor, but this can no longer be an excuse to avoid the educational potential available to students. Even though some art educators are hesitant to involve computers, or the Internet, into their curriculums, these machines now speak the language all art educators can understand due to design improvements. While traditional mediums will always have a place in art classrooms, there are more reasons every day for the incorporation of the Internet into art classes. Any study that results in evidence that will eventually encourage art teachers to implement Internet integration into their curriculums will be advantageous to students as well as teachers.

Doyle states (1999) "Change is part and parcel of being a teacher in the late 20th century". "Some trends, however are likely more than a passing fad; they are a fundamental change in the way we teach and students learn" (Doyle, 1999). Chance (1986) on writing about educational reform noted that "the reforms of the 1980's to this point have been less than liberally spiced with innovation". But one fundamental

“development is the increased use of technology in the classroom” (Doyle, 1999).

Studies show that art teachers usually teach children in their classrooms as they themselves were taught. Clearly few art teachers now educating our nations’ children were taught using the Internet. “Yet few courses are available to increase teachers’ familiarity and, therefore, comfort level with computers” (Greh, 1997). This study is designed to identify if these are areas of need as well as others for art teachers in central Wisconsin.

How can art teachers be convinced that there are immense benefits from the inclusion of this computer technology, and in particular the Internet, into their curriculums. Improved student performance has to be one of the main reasons. Doyle (1997) states “that students have a new relationship to knowledge and that they are involved in actively creating knowledge”. “By giving students access to and training in the Internet, we empower them to become active learners” (Doyle, 1997). “Critical thinking skills can be developed when students are able to compare, contrast, and analyze a multitude of artworks created by the same or different artists” (Dilger & Roland, 1993). Dilger and Roland also state, “Students can actively interact with the computer in their search for images”. “They can be in control of the technology and responsible for their learning, instead of being passive viewers” (Dilger & Roland, 1993). “The use of

the Internet can challenge students, accommodate individual, cognitive styles of learning, and provide alternatives for differing interests and learning styles” (Heise & Grandgenett, 1996).

All these student behaviors easily fit in with the newer instructional focus of today’s schools. Students can learn to locate information, to think critically about it, to use it to develop new experiences and to go beyond this information in innovative ways.

Although there does not seem to be many studies on the use of the Internet in the art classroom, the information that is available states many beneficial results and few negative aspect of Internet integration into art classrooms. Greh (1997) estimates that only 15% to 20% of teachers from all disciplines and levels have fully integrated computers into their curriculums, but “Art education is beginning to rise to the challenge of new technologies” (Julian, 1997).

A review of the literature shows that, “In the majority of school districts there is neither instruction nor incentives for teachers to receive technology training” (National Alliance of Business, 1999).

Furthermore, (Davies, 1995) stated that one key to “successful implementation of technology is ongoing training and support, with targeted inservice to prevent teachers from feeling frustrated or ill-prepared for working with technology”.

In another study, results show "the teachers confidence in his/her own ability to implement technology was a strong prediction in the amount of technology use" (Henry, 1993).

Therefore, the research hypothesis for this study is that art teachers who have more training in Internet integration and higher levels of confidence in their ability to use technology will report improved educational performance in their classrooms as compared to those teachers who have low confidence and little training.

STATEMENT OF PROBLEMS

The purpose of this study is to describe art teacher Internet integration training and confidence levels as measured by a teacher survey and to describe teacher perceptions of resulting educational performance levels of art students.

This study will focus on the following objectives.

1. **To determine the percentage of art teachers that have received Internet training.**
2. **To determine the percentage of art teachers that have received Internet integration training.**
3. **To determine what percentage of art teachers feel confident in their ability to use Internet technology.**
4. **To determine if integration of the Internet into art classrooms improves teacher satisfaction.**
5. **To determine if art teachers perceive integration**

of the Internet into art classrooms improves student satisfaction.

METHODOLOGY

Introduction

This was a descriptive study examining teacher perceptions of educational performance along with art teacher training and confidence levels in relation to Internet integration. This section contains a description of subjects, an explanation and description of the measurement instrument, an explanation of procedure, and a description of how the data was analyzed.

Subjects

The subjects for this study were art teachers from the Cooperative Educational Service Agency (CESA) 10, which is in west central Wisconsin. A list of all districts under this group was obtained from the CESA 10 website in the School District Directory. This list includes 36 school districts. Most of these districts have more than one art teacher. The art teachers consisted of full and part-time educators. The grade level coverage was kindergarten to grade 12. Participants of the study were given a brief description of the purpose of the questionnaire through an introductory letter.

Instrumentation

A survey of 11 items was developed by the researcher and mailed to art teachers in the various buildings of each district of the CESA 10 directory.

A cover letter with a brief purpose of the study and suggested time frame for completion was included with the survey.

The survey consisted of demographic information about grade levels taught by respondents and the amount of teaching experience of each teacher. Teachers were asked to respond to questions about Internet access and weekly usage. Where teachers received Internet training and the sources that provided the training were also addressed in the survey. The last area covered in the questionnaire was the teachers' Internet usage perceptions. This area used the Likert scaling procedures.

Directions were given to teachers on how to complete the survey along with return information. An e-mail address was supplied in case of teacher questions.

A self-addressed, stamped envelope was included to encourage teachers to return the survey.

Procedure

The survey, cover letter, and self-addressed, stamped envelope were mailed out on April 24, 2000 to individual art teachers through the U.S. Postal Service. Participants were encouraged to accurately fill out the survey and return it in

the enclosed envelope. If the response rate was low a reminder note card would have been mailed out three weeks later. The reminder was not used because the response rate was over 70%.

Analysis of Data

The statistical analysis of the surveys was done using percentage, frequency, and mean scores for each of the following areas: teacher Internet training, teacher Internet integration training, teacher confidence levels, teacher satisfaction, and student satisfaction.

Definition of Terms

URL-(Uniform Resource Locator) an identification system that provides the protocol and address of any Internet address.

World Wide Web-is the portion of the Internet that includes pictures as well as text and provides the ability to link information on one computer with relevant information on another computer anywhere in the world.

CHAPTER II

REVIEW OF LITERATURE

Introduction

In this chapter, teacher perceptions of educational performance along with art teacher training and confidence levels in relation to Internet integration will be explored. The chapter focuses on five areas of research including, historical reasons for inclusion of visual arts in schools, instructor knowledge of Internet use and integration, instructor confidence levels and technology, advantages and disadvantages of Internet integration, student and teacher satisfaction levels due to Internet use, and current as well as future uses of the Internet in art classes.

Historical Reasons for Inclusion of Visual Arts in Schools

Greek, roman and numerous oriental cultures have consistently placed a high value on the visual arts throughout history. The same cannot be said for the visual arts in America, especially the status of the visual arts in our nation’s schools. One of the reasons for this difficult start of visual arts in our educational system was because of the existence of a predominantly Puritan heritage. The schools of colonial time were created to instruct students in subjects not learned at home. The Puritan population felt the visual arts were taught at home through practical items like fine needlework, quiltmaking, painted and carved furniture- making and architecture. According to Smith

(1996) “art education as apprenticeship in craft were the rule in colonial European-derived America and continued in that same culture in the years stretching from revolutionary days into the beginning of industrialization in the nineteenth century”.

The Industrial Drawing Act of 1870 is usually regarded as the first serious attempt to include art in the curriculum. This act was created by “wealthy and influential industrialists wanting to force on the schools training of designers for their own industries (Smith, 1996). Industrial drawing did not prepare students to understand the American art world or the heritage of art, other than some copying of historic designs. At this point in history the visual arts reason for being part of school curriculum was only for economic benefit.

Picture study appeared sometime in the late 1800s and was an outstanding element in art education for more than fifty years. According to Neale (1933) the book, Picture Study in the Grades:

> **aims primarily to develop in the children of our schools an appreciation of the great masterpieces of art so that they may know the joy that comes from such appreciation and so their ideas may be influenced by the patriotism, the piety and the beauty which the great artists of different ages have given the world.**

Self-expressionism was one of the prominent teaching styles for the visual arts in the in the early twentieth century. Supporters of this method claimed it was valuable because students were allowed to vent their personal feelings in an appropriate manner. In the late 1940's Lowenfeld extended the psychological rationale "to claim that art would lead to a healthy individual who could build a healthy society" (Smith, 1996).

Art education programs in schools today have changed from the free expression style of learning to a much greater emphasis on art history, art appreciation and art criticism along with multicultural education.

A few of the current day reasons for the inclusion of the visual arts in school curriculum follows:

- **Art can be learned like any other subject and is the foundation for effective visual perception and the development of visual perception is the base to learning in any field.**
- **"The arts complement the sciences because they nurture different modes of reasoning. The arts teach divergent rather than convergent thinking" (Fowler, 1994).**
- **Current school curriculums are heavily weighted toward correct or incorrect answers. In art there are often no single correct answers to artistic problems; there are many. Students must think about**

the problem and decide what works best, which requires the development of judgement skills.

- **"The arts require students to apply standards to their own work, to be self-critical and to be able to self-correct. Through the arts students learn self-discipline and how to handle frustration and failure in pursuit of their goals" (Fowler, 1994).**
- **York (1998) states "art educates the whole person as an integrated individual: it educated the senses it educates the mind, and it educates the emotions. It educates the soul".**

Instructor Knowledge of Internet Use and Integration

Are our nations art instructors adequately prepared to assist students with the development of technology skills necessary for life in the 21st century? "The teacher plays a central role in determining the use of technology in the classroom, and therefore, has to be informed on how it can be used successfully" (Heise & Grandgenett, 1996). But according to Greh (1997) only about 15% to 20% of all teachers receive the training necessary to successfully use instructional technology.

The Sallis Committee (as cited in Gilmore, 1995) identified three areas where teachers needed professional development to enable them to use computers effectively in the classroom.

> **First, teachers who have never used computers need some training in simple technical aspects prior to using a computer in a classroom and an indication of how other teachers use computers to enhance learning for their students; second, teachers who have some knowledge of the technology require assistance in integrating computer use across the curriculum and in developing management strategies within the classroom; and third, all teachers need the opportunity for regular discussions with peers and a recognized educational computing expert to share ideas, reflect upon and evaluate current strategies, and to be informed about new developments.**

Also, The Sallis Committee (as cited in Gilmore, 1995) found that "school-based training is more effective than taking teachers out of the class for training".

Even with training in the use of technologies "studies have shown that it often takes three or more years for teachers to make a substantial change in teaching" (Hord & Huling-Autin, 1987).

But these changes are worth the effort. The Center for Professional Development and Technology (CPDT) (as cited in Curtin, Cochrane, Avila, Adams, Kasper & Wubbena, 1994) state that after training "participants constantly search out new ways to integrate technological tools to increase personal productivity, communicate with one another and with distant

audiences…". Once teachers have acquired the knowledge of technology use and implementation they can use these tools to motivate and inspire students in their classes.

Instructor Confidence Levels and Technology

Can the teacher's belief in their own ability to use technology effect how technology is used in their classrooms? Dunn (1996) states:

> **Many instructors are apprehensive and tentative when confronted with technology. They tend to sit on their hands as they sit down. Tiny beads of perspiration form on their foreheads and they approach the mouse as if it were a piece of river rock that had been heated red hot.**

One reason for these kind of behaviors is that many teachers encounter instructional computers later in life, and usually see them as tools of a troublesome nature, that are complicated and expensive (Dunn, 1996).

Teachers look for step-by-step instructions, to use as a guide, when working with technology much sooner than students (Dunn, 1996). This may be due to the fact many school children have operated educational technology long before they learned to read and have learned to not be afraid of experimentation. Teachers were often worried about getting lost, or pressing the wrong button and damaging the computer (Pina & Savenye, 1992).

Pina and Harris (1993) state: "Technology integration programs that do not address the issue of alleviating computer anxiety and increasing teacher confidence in using computers, may face a great stumbling block in either overt or covert resistance from teacher".

If teacher confidence can be improved everyone will benefit because "teacher's confidence in his/her ability to implement the technology was a strong predictor in the amount of technology use" (Henry, 1993).

Advantages of Internet Integration

The educational benefits of the Internet seem almost endless. Some of these positive aspects are extremely advantageous to rural schools. Koos and Smith-Shank, 1996) state:

> **This technology has tremendous potential for the art education community. The Web can be used to create art, to post art images (with parent permission), and to exchange conversations in both words and pictures. It can provide access to museum collections and other art images previously unavailable in the classroom. There are also collections on the World Wide Web which exist only in cyberspace. These websites or virtual museums serve as collections of interrelated material about a specific topic or artist.**

Rural schools that have little chance for field trips to art museums can now electronically visit art museums and galleries all around the world at their convenience.

"Students and teachers can research databases on the Internet to find information on artists or periods in art history" (Heise & Grandgenett, 1996).

Another area that is a favorite of art educators is the lesson plan sites some of which display whole units. These plans are often listed by topic and grade levels. Many sites also give children and teachers the ability to discuss topics, ideas, artwork, etc.

"The Web offers students access to countless people, places, and ideas that can enlighten and inspire" (Greh, 1997). Although, students are often limited in the number of choices available under some topic areas, some choice is better than virtually no choice. "This freedom to choose may be the most compelling reason for art teachers to invest in interactive integrated technology…in their repertoire of instructional approaches" (Dunn, 1996).

The Center for Professional Development and Technology (as cited in Curtin et al, 1994) stated that trained teachers "report more independent student work, a transition to more student-centered classrooms, and more cooperative efforts among students". With the use of the Internet it is also very easy for teachers to use individualized instructional techniques.

Disadvantages of Internet Integration

All teachers can think of fellow educators who, without hesitation, will tell you a multitude of reasons why the Internet is a terrible teaching tool for our nations' schools. Unfortunately, these teachers often have valid points, but teacher persistence and effort can prevail in the end.

One of the most frequently mentioned disadvantages, according to Koos and Smith-Shank (1996) is that "web access is dependent upon equipment, software and knowledge, including the type and numbers of computer, monitors, modems, or fiber optic connections". Another problem that is closely related is that schools often do not have the advanced technical support they need to keep the equipment operating properly or the money needed to purchase it.

The URLs of websites can change from one day to the next as sites are updated or deleted.

Another difficulty is the "Under Construction" sign which means that the site is in the process of being changed or updated and will probably not operated well, (Koos, Smith-Shank, 1996).

Time is also a huge factor in effective Internet integration. If teachers are not willing to spend a fair amount of time developing skills and surfing the web implementation will be limited.

Integration of the Internet into the Art Curriculum

Dilger and Roland (1993) state "New technologies do not replace old technologies, they simply increase the media modes available". "Let curriculum drive the technology, rather than the reverse" (Ettinger, 1988).

According to Dilger and Roland (1993) use these "new tools to bridge the gap between what happens in the classroom and what is happening in the real world". But art teachers need to carefully consider when and how it is appropriate to integrate the Internet into their lessons.

Student and Teacher Satisfaction

According to a National Alliance of Business (1997) report "numerous studies have consistently reported improvements in student performance, student motivation, and teacher satisfaction". Greh (1990) noted that when students use computers in a creative way they are more experimental, work with more intensity, check out more alternatives than with typical methods of instruction. Dilger and Roland (1993) state that "there are numerous reports by practicing art teachers of a dramatic increase in interest and excitement among students as a direct result of introducing computers into the curriculum".

Future Changes Due to the Use of the Internet in Education

Before most educators have had a chance to roll chairs up to their computers, the world has embarked on a fascinating and ever changing ride down the information

superhighway or Internet. According to the UCLA Center for Communication (2000) "everyone either loves or hates the Internet, but there's no question that the impact of the Internet is real and profound—certainly the most important communication technology of the generation to come".

Greh (1997) states that all areas of education will feel the impact of technology and art education will feel the impact through:

- **Art-the way it is created and the way it is viewed.**
- **Education-what students need to know, how they learn, and how they are taught.**
- **Art Education-what students create, how art is created, new ways of teaching about art, and new approaches to integrating art with other disciplines.**

Greh (1997) also states that "what this means for teachers and students is that a whole new resource for the research and exchange of ideas has been opened up and this resource has no geographic or temporal boundaries".

The Internet will not be a panacea for all problems in art education. If not used with care this new technology could actually harm art education. However, the promise for this new technology far outweighs the problems. The possibilities of the Internet as a teaching tool are endless and hopefully, will help strengthen art education in many ways.

CHAPTER III

RESULTS AND DISCUSSION

Introduction

In this chapter, results of the survey sent to Cooperative Educational Service Agency (C.E.S.A.) 10 art instructors will be reviewed. The survey was sent to 86 art teachers through the Postal Service. 63 of the art teachers returned the survey resulting in a 73% return rate. This chapter has three sections. Section one focuses on the grade levels respondents teach, teaching experience, Internet access and usage, Internet training and sources of training. Student and teacher satisfaction levels along with comfort and confidence levels of respondents will also be discussed. Section two of this chapter focuses on the differences between teachers with and without Internet training and those that are confident in their ability to integrate the Internet as compared to those teachers who are not. Section three contains a discussion of the results.

An item by item analysis follows on the data collected from the art teacher survey.

Demographic Information

The demographic information from the survey is given in Tables 1 and 2. Demographic information included in the tables are the grade levels currently taught by the respondents and the amount of teaching experience of respondents.

TABLE 1

Grade Levels

Grade Levels	*Frequency*	*Percent*
Pre K-3	0	0%
Grades 4-6	1	1.58%
Grades 7-8	5	7.93%
Grades 9-12	16	25.39%
Kindergarten-12	8	12.69%
Pre K-6	20	31.74%
Grades 4-8	6	9.52%
Grades 7-12	4	6.34%
Other Combinations	3	4.76%

n=63

Grade Levels Currently Taught The results of the surveys showed many combinations of grade levels being taught in the C.E.S.A. 10 area by the 63 art teachers who returned the survey. More teachers who are teaching at the Pre K-6 (31.74%) completed the survey than any other grade level teaching group. None of the art teachers who responded to the survey teach only Pre K-3 grade levels.

TABLE 2

Amount of Teaching Experience

Years	*Frequency*	*Percent*
1-5 years	11	17.46%
6-10 years	10	15.87%
11-15 years	12	19.04%
16-20 years	10	15.87%
20-25 years	10	15.87%
25 or more years	10	15.87%

n=63

Teaching Experience **Results showed that there were more art teachers in the 11 to 15 years (19.04%) of teaching experience group than any others responding to the survey, but not by a large amount. The next largest teaching experience group was only one teacher less in respondents. There was only a difference of 2 teachers between the lowest and highest number of respondents in the 6 groups.**

TABLE 3

Classroom Internet Access

	Frequency	*Percent*
Yes	51	80.95
No	12	19.04

n=63

Classroom Internet Access **Of the 63 surveys returned, the majority (80.95%) of the respondents have access to the Internet in their art classrooms. 19.04% of the art teachers**

questioned do not have access to the Internet in their classrooms.

TABLE 4

Weekly Internet Usage

	Frequency	***Percent***
Never	**6**	**9.52%**
0-2	**25**	**39.68%**
6-8	**15**	**23.80%**
8-10	**4**	**6.34%**
10 or More	**13**	**20.63%**

n=63

Weekly Internet Usage **39.68% (F=25) of the respondents estimated they used the Internet only 0-2 times per week. 23.80% (F=15) of the respondents used the Internet about 6-8 times per week. 20.63% (F=13) of the teachers used the Internet at least 10 or more times a week. 9.52% (F=6) of the art teachers surveyed never use the Internet compared to 6.34% (F=4) used the Internet 8-10 times a week. More than half (50.77%) of the art teachers surveyed probably use the Internet about once a day or more in a typical week.**

TABLE 5

Internet Training

n=63	*Frequency*	*Percent*
Yes	46	73.01%
No	17	26.98%

Training in How to Use the Internet Almost three-fourths (73.01%) of the art teachers who responded to the survey have received some type of training in how to use the Internet. 26.98% of the art teacher respondents have received no training in Internet operation.

TABLE 6

Teacher Training Sources

n=63	*Frequency*	*Percent*
University Class		
Never	38	60.31%
Some	25	39.68%
Frequently	0	0.00%
District In-Service		
Never	13	20.63%
Some	46	73.01%
Frequently	4	6.34%
Co-Workers		
Never	20	31.74%
Some	40	63.49%
Frequently	3	4.76%

Teacher Training Sources

- **University Classes** Of the 63 respondents 38 (60.31%) have never received training from a university class. Twenty-five (39.68%) of the art teachers who filled out the survey have received some Internet training through a university class. Zero respondents have frequently received any form of Internet training through university classes.
- **District In-Services** Nearly three-fourths (73.01%) of the art teacher respondents have received some training in how to use the Internet through district in-services. Thirteen (20.63%) of the respondents have never received Internet training through in-services offered by their district. Four (6.34%) of the responding art teachers have received frequent training in Internet use through district in-services.
- **Co-Workers** Training in the use of the Internet has been provided to 63.49% (F=40) of the respondents by other teachers. 4.76% (F=3) of the art teachers who responded have received frequent training from co-workers. 31.74% (F=20) of the respondents who filled out the survey have never received any Internet training from another teacher.

TABLE 7

Teacher Internet Integration Training Sources

	Frequency	*Percent*
University Class		
Never	**45**	**71.42%**
Some	**18**	**28.57%**
Frequently	**0**	**0.00%**
District In-Service		
Never	**28**	**44.44%**
Some	**30**	**47.61%**
Frequently	**5**	**7.93%**
Co-Workers		
Never	**31**	**49.20%**
Some	**30**	**47.61%**
Frequently	**2**	**3.17%**

n=63

Teacher Internet Integration Training Sources

- **University Classes** **Almost three-fourths (71.42%) of the art teachers that completed the survey have never received training in how to integrate the Internet into their art curriculums through a university class. Only about one-fourth (28.57%) of the respondents have received some Internet integration training through a university class. No one who filled out the survey reported frequently receiving training in Internet integration by a university class.**

- **District In-Service** Nearly one-half (47.61%) of the art teachers who responded to the survey stated they have received some Internet integration training through district in-services. 7.93% (F=5) art teachers reported they have frequently received this same type of training by district in-services. The rest of the respondents (44.44%) have never learned how to integrate the Internet into their art education curriculums through district in-services.
- **Co-Workers** Almost half (49.20%) of the art teachers that returned the survey answered that they have never been trained in how to integrate the Internet into their art curriculums by co-workers. Nearly all of the remaining respondents (47.61%) have been assisted by fellow educators in how to incorporate the Internet into their curriculums. 3.17% (F=2) of the art teachers reported receiving frequent training by co-workers in how to integrate the Internet into their teaching as an instructional tool.

Internet Usage Perceptions

In the second part of the survey teachers responded to statements that had a range of five available responses from strongly disagree to strongly agree. Information is given in percentages, mean and standard deviation for each statement. Mean scores are based on survey responses with strongly disagreeing receiving a value of 1 and then ranging to a

possible 5 for strongly agreeing. Results are given in Tables 8-11.

TABLE 8

Comfort Levels Involving Internet for Instruction

	Frequency	*Percent*
Strongly Disagree	5	7.93%
Disagree	11	17.46%
Undecided	10	15.87%
Agree	23	36.50%
Strongly Agree	14	22.22%
Mean 3.476	*Standard Deviation 1.242*	

n=63

Comfort Levels When Using Internet for Instruction When asked 22.22% (F=14) of the art teacher respondents answered that they strongly agreed with the statement "I felt comfortable using the Internet in my art classroom for instructional purposes". 36.50% (F=23) of the art teachers responding agreed with the statement. One-quarter (25.30%) of the respondents did not feel comfortable using the Internet for instructional purposes. 7.93% (F=5) strongly disagreed with the statement and 17.46% (F=11) disagreed. Ten teachers (15.87%) were undecided if they were comfortable using the Internet for instructional purposes. The mean score was 3.476 with a standard deviation of 1.242.

TABLE 9

Teacher Confidence Levels in Relation to Internet Instruction

	Frequency	*Percent*
Strongly Disagree	**6**	**9.52%**
Disa*gree*	**9**	**14.28%**
Undecided	**11**	**17.46%**
Agree	**29**	**46.03%**
Strongly Agree	**8**	**12.69%**
Mean 3.38	***Standard Deviation 1.169***	

n=63

Teacher Confidence Levels in Relation to the Use of the Internet as an Instructional Tool **Almost half (46.03%) of the art teachers who returned the surveys agreed with the following statement "I feel confident in my ability to effectively use the Internet as an instructional tool." 12.69% (F=8) of the respondents feel very confident in their ability to use the Internet in this way and strongly agreed and 46.03% (F=29) of the respondents agreed with the statement. Almost a quarter of the respondents did not agree that they felt confident in their ability to effectively use the Internet as an instructional tool. The undecided response rate was 17.46%. The mean score was 3.38 with a standard deviation of 1.169.**

TABLE 10

Student Satisfaction Levels Due to Internet Integration

	Frequency	*Percent*
Strongly Disagree	**2**	**3.17%**
Disagree	**12**	**19.04%**
Undecided	**23**	**36.50%**
Agree	**22**	**34.92%**
Strongly Agree	**4**	**6.34%**
Mean 3.222	***Standard Deviation .94***	

n=63

Student Satisfaction Levels Due to Internet Integration

Over 40% of the art teacher respondents agreed with the statement "I feel student satisfaction is increased when Internet integration is part of my classroom instruction". 34.92% (F=22) of the responding art teachers agreed with this statement and 6.34% (F=4) strongly agreed. Many teachers (36.50%) who filled out the survey were undecided about the statement. 19.04% (F=12) of the respondents disagreed that student satisfaction is increased when Internet integration is part of a teachers instructional techniques. 3.17% (F=2) of respondents strongly disagreed with the statement. The mean score was 3.222 with a standard deviation of .94.

TABLE 11

Teacher Satisfaction Levels Due to Internet Integration

	Frequency	*Percent*
Strongly Disagree	5	7.93%
Disagree	18	28.57%
Undecided	31	49.20%
Agree	9	14.28%
Strongly Agree	0	0.00%
Mean 2.698	*Standard Deviation .815*	

n=63

Teacher Satisfaction Levels Due to Internet Integration

Nearly half of the art teachers that completed the survey were undecided about the following statement: "I feel more satisfaction with lessons that integrate the Internet as a teaching tool as compared to lessons that do not". None of the respondents strongly agreed with the statement. Although 14.28% (F=9) agreed they felt more satisfaction with lessons that integrated the Internet into their classroom teaching. 36.50% of the teachers who returned the surveys had negative feelings about how they felt when teaching lessons that used Internet integration. 28.57% (F=18) disagreed with the statement listed above and 7.93% (F=5) strongly disagreed. The mean score was 2.698 with a standard deviation of .815.

Differences Between Art Teacher Internet Integration Training Levels

Percentages, means and standard deviations were found to show the difference between how art teachers with training in Internet integration compared to those art teachers that do not have training. Results are given in Tables 12-15.

TABLE 12

Differences Between Trained and Untrained Teachers' Comfort Levels Involving the Internet for Instruction

	Respondents With Training		*Respondents Without Training*	
	n=42		*n=21*	
	Frequency	*Percent*	*Frequency*	*Percent*
Strongly Disagree	2	4.76%	3	14.28%
Disagree	5	11.90%	6	28.57%
Undecided	7	16.66%	3	14.28%
Agree	17	40.47%	6	28.57%
Strongly Agree	11	26.19%	3	14.28%
	Mean 3.714		*Mean 3*	
	Standard Deviation 1.132		*Standard Deviation 1.341*	

Difference Between Trained and Untrained Teachers Comfort Levels Involving the Internet for Instruction **The survey respondents that have received Internet training numbered 42. Twenty-one respondents have received no training in how to use the Internet as an instructional tool**

by university classes, district in-services or other teachers.

When art teachers that responded to the survey answered a question about feeling comfortable using the Internet in their classroom for instructional purposes, nearly half of the teachers without training (42.85%) had negative feelings. Only 16.66% of the art teachers with training reported negative feelings. There was only a difference of one teacher in frequency between the strongly disagree respondent groups, but when looking at percentages 4.76% (F=2) of the teachers with training compared to 14.28% (F=3) of the teachers without training.

Seven (16.66%) of the surveyed trained respondents were undecided about their comfort levels when using the Internet for instruction. Three (14.28%) of the untrained respondents reported being undecided over the same issue. 66.66% of the teachers with training had positive feelings about comfort levels when using the Internet for instruction as compared to 42.85% of the teachers without training. Within the group of teachers with Internet training 40.47% (F=17) agreed with the statement about comfort level, and 26.19% (F=11) strongly agreed. For the respondents without Internet training 28.57% (F=6) of the teachers agreed with the statement and only 14.28% (F=3) strongly agreed.

The mean score for the survey respondents with Internet training was 3.714 with a standard deviation of 1.132. For

teachers without training the mean was 3 with a standard deviation of 1.341.

TABLE 13

Difference Between Trained and Untrained Teachers' Confidence Levels in Relation to Use of the Internet as an Instructional Tool

	Respondents with Training		***Respondents Without Training***	
	n=42		***n=21***	
	Frequency	***Percent***	***Frequency***	***Percent***
Strongly Disagree	**2**	**4.76%**	**4**	**19.04%**
Disagree	**4**	**9.52%**	**5**	**23.80%**
Undecided	**10**	**23.80%**	**1**	**4.76%**
Agree	**21**	**50.00%**	**8**	**38.09%**
Strongly Agree	**5**	**11.90%**	**3**	**14.28%**
	Mean 3.547		***Mean 3.047***	
	Standard Deviation .992		***Standard Deviation 1.43***	

<u>Difference Between Trained and Untrained Teachers Confidence Levels in Relation to Use of the Internet as an Instructional Tool</u> **42.84% (F=9) of the art teachers with no training that responded to the survey reported having negative feelings toward the statement "I feel confident in my ability to effectively use the Internet as an instructional tool". Only 14.28% of the teachers with some type of Internet training responded in a negative manner. Of**

the teachers with Internet training only 2 (4.76%) strongly disagreed with the statement about confidence levels and 4 (19.04%) of the teachers without training strongly disagreed. 9.52% (F=2) of the teachers with Internet training and 23.80% (F=5) of the teachers without Internet training disagreed with the statement. Many more teachers with training who responded said they were undecided about their comfort levels when using the Internet as an instructional tool. Ten (23.80%) of trained teachers were undecided compared to 1 (4.76%) of teachers with no training.

Both trained and untrained teacher respondent groups had high amounts of positive answers. 61.90% of trained teachers agreed with the concept of being confident when using the Internet in their art classrooms as an instructional tool. 52.37% of the teachers without training also agreed with the statement. 50.00% (F=21) of the teachers with Internet training agreed with the statement and 11.90% (F=5) of this same group strongly agreed. In comparison 38.09% (F=8) of the teachers with no training in Internet use as an instructional tool agreed with the statement and 14.28% (F=3) strongly agreed.

The mean score for the group of art teacher respondents with Internet training was 3.547 with a standard deviation of .992. The mean score for the group of art teachers that had no training in the use of the Internet as an instructional tool was 3.047 with a standard deviation of 1.43.

TABLE 14

Difference Between How Trained and Untrained Teachers Perceive Student Satisfaction Levels Due to Internet Integration

	Respondents With Training		*Respondents Without Training*	
	n=42		*n=21*	
	Frequency	*Percent*	*Frequency*	*Percent*
Strongly Disagree	0	0%	2	9.52%
Disagree	7	16.66%	5	23.80%
Undecided	12	28.57%	11	52.38%
Agree	19	45.23%	3	14.28%
Strongly Agree	4	9.52%	0	0.00%
	Mean 3.476		*Mean 2.714*	
	Standard Deviation .89		*Standard Deviation .845*	

Differences Between How Trained and Untrained Teachers Perceive Student Satisfaction Levels Due to Internet Integration No respondent in the group of art teachers with Internet integration training answered that they strongly disagreed with the statement "I feel student satisfaction is increased when Internet integration is part of my classroom instruction". 16.66% (F=7) of the teachers from this trained group disagreed with the statement. Of the group of art teachers without training in Internet integration that returned the survey 9.52% (F=2) strongly disagreed with the

statement and 23.80% (F=5) of this group disagreed with the concept that student satisfaction is increased due to Internet integration. 52.38% (F=11) of the respondents from the group of art teachers without Internet integration training were undecided if the use of the Internet in this manner improved student satisfaction as compared to 28.57% (F=12) of the art teachers with training. Over half (54.75%) of all art teachers that have had training in how to integrate the Internet into their classrooms had positive responses to the idea that student satisfaction is increased due to Internet integration compared to only 14.28% (F=3) of art teachers with no training. Of the art teachers agreeing with the statement 45.23% (F=19) came from teachers with training. 14.28% (F=3) came from teachers without training. 9.52% (F=4) of the art teachers from the group of teachers with training strongly agreed while 0% of the art teachers without training felt this way.

The mean score for the group of art teachers with training was 3.476 with a standard deviation of .89. The mean score for the group of art teachers that have not received training was 2.714 with a standard deviation of .845.

TABLE 15

Difference Between Satisfaction Levels of Art Teachers With and Without Internet Integration Training

	Respondents With Training		*Respondents Without Training*	
	n=42		*n=21*	
	Frequency	*Percent*	*Frequency*	*Percent*
Strongly Disagree	1	2.38%	4	19.04%
Disagree	9	21.42%	9	42.85%
Undecided	24	57.14%	7	33.33%
Agree	8	19.04%	1	4.76%
Strongly Agree	0	0.00%	0	0.00%
	Mean 2.928		*Mean 2.238*	
	Standard Deviation .712		*Standard Deviation .83*	

Differences Between Satisfaction Levels of Art Teachers With and Without Internet Integration Training 61.89% of the art teachers without Internet integration training who responded to the survey had negative feelings toward the concept of feeling more satisfaction with lessons that integrate the Internet as a teaching tool. Only 23.80% of the art teachers that had training in how to integrate the Internet as a teaching tool listed negative responses. One (2.38%) teacher of the group that had training strongly disagreed and 9 (21.42%) disagreed with the concept. Four (19.04%) of the teachers without Internet training listed

their response as strongly disagree and 9 (42.85%) reported disagreeing with the concept. More than half (57.14%) of the respondents who have had Internet integration training reported being undecided about the idea of increased teacher satisfaction with lessons that incorporate the Internet. 33.33% (F=7) of the respondents with no training said they were undecided about this statement. 19.04% (F=8) of the art teachers with training that returned the survey agreed teacher satisfaction is increased due to Internet integration. In comparison only 4.76% (F=1) of the art teachers with no training felt the same way. None of the teachers from the group who filled out the survey strongly agreed with this statement.

The mean score for the group of teachers with Internet integration training was 2.928 with a standard deviation of .712. In comparison the mean score for the group of art teachers with no Internet integration training was 2.238 with a standard deviation of .83.

Confidence Levels

Percentages, mean and standard deviation was found to show the difference between art teachers with higher confidence and comfort levels as compared to those with lower confidence and comfort for the areas of student and teacher satisfaction levels. Results are given in Tables 16 and 17.

TABLE 16

Differences Between How Teachers With Higher or Lower Confidence Perceive Student Satisfaction Levels Due to Internet Integration

	Confident Respondents		*Not Confident Respondents*	
	n=41		*n=17*	
	Frequency	*Percent*	*Frequency*	*Percent*
Strongly Disagree	0	0.00%	2	11.76%
Disagree	8	19.51%	4	23.52%
Undecided	12	29.26%	9	52.94%
Agree	18	43.90%	1	5.88%
Strongly Agree	3	7.31%	1	5.88%
	Mean 3.39		*Mean 2.705*	
	Standard Deviation .891		*Standard Deviation .985*	

Difference Between How Teachers With Higher or Lower Confidence Perceive Student Satisfaction Levels Due to Internet Integration Forty-one surveyed art teachers felt confident and comfortable with their ability to use Internet integration as a teaching tool. Seventeen art teachers did not feel confident or comfortable with their capability to do this. Five art teachers were undecided about their ability and are not listed in this chart's data. 11.76% (F=2) of the art teacher respondents with low confidence and comfort

levels in their ability to use Internet integration for instructional purpose strongly disagreed with the statement "I feel student satisfaction is increased when Internet integration as part of my classroom instruction." No one in the group of art teachers with higher confidence and comfort levels strongly disagreed with the same statement. 23.52% (F=4) of the respondents with lower confidence disagreed with the statement and 19.51% (F=8) of the teachers with higher confidence disagreed. Over half, or 52.94% (F=9) of the respondents with lower confidence levels in their ability to effectively integrate the Internet were undecided if student satisfaction was increased due to Internet integration. Only about a quarter, or 29.26% (F=12) of the art teachers with higher levels of confidence felt this way about student satisfaction. Over half of the art teachers with higher confidence were in agreement with the concept of improved student satisfaction due to Internet integration compared to only a little over a tenth, or 11.76% of art teachers with lower confidence levels. 43.90% (F=18) of respondents with higher confidence levels agreed with the concept of student satisfaction increasing due to Internet integration and 7.31% (F=3) strongly agreed. 5.88% (F=1) of the respondents with lower confidence levels agreed with the student satisfaction statement and 5.88% (F=1) strongly agreed.

For the group of art teachers with higher confidence levels the mean score was 3.39 with a standard deviation of

.891. The mean score for the teachers with lower confidence levels was 2.705 with a standard deviation of .985.

TABLE 17

Difference Between Satisfaction Levels of Art Teachers Who Felt Confident or Not Confident in their Ability to Use the Internet as an Instructional Tool

	Confident Respondents		*Not Confident Respondents*	
	n=41		*n=17*	
	Frequency	*Percent*	*Frequency*	*Percent*
Strongly Disagree	3	7.31%	2	11.76%
Disagree	11	26.82%	7	41.17%
Undecided	20	48.78%	8	47.05%
Agree	7	17.07%	0	0.00%
Strongly Agree	0	0.00%	0	0.00%
	Mean 2.756		*Mean 2.352*	
	Standard Deviation .83		*Standard Deviation .701*	

<u>Difference Between Satisfaction Levels of Art Teachers Who Felt Confident or Not Confident in their Ability to Use the Internet as an Instructional Tool</u> **Forty-one survey respondents felt they were confident and comfortable using Internet integration for instructional purposes. Seventeen art teachers did not feel confident or comfortable using Internet integration for instructional purposes. Five**

teachers were undecided about how they felt about this topic and are not included in this chart's data.

Over half of the art teachers who returned the survey stated they were not confident or comfortable using Internet integration for instructional purposes and did not feel increased teacher satisfaction with this form of instruction. In comparison 34.13% of art teachers who felt confident and comfortable in their ability to effectively use Internet integration reported increased satisfaction with their teaching. 11.76% (F=2) of the art teachers with lower confidence levels and 7.31% (F=3) of the art teachers with higher confidence said they strongly disagreed with the concept of Internet integration improving teacher satisfaction levels. 41.17% (F=7) of art teachers with lower confidence and 26.82% (F=11) of art teachers with higher confidence disagreed with the teacher satisfaction statement. Both groups had about the same percentage of teachers who were undecided about teacher satisfaction levels increasing due to Internet integration into their classrooms. These groups consisted of almost half of the teachers responding from each group. 48.78% (F=20) for teachers with higher levels of confidence and 47.05% (F=8) for teachers with low confidence. For the teachers with higher confidence levels, 17.07% (F=7) agreed with the statement about teacher satisfaction increasing due to Internet integration into their classrooms. None of the art teachers from the group

with lower confidence agreed. No one in either group strongly agreed.

The mean score for the group of teachers who stated they felt confident and comfortable integrating the Internet into their classrooms was 2.756 with a standard deviation of .83. The mean score was 2.352 with a standard deviation of .701 for the group of teachers with lower confidence and comfort levels.

Discussion

The purpose of this study was to obtain and analyze C.E.S.A. 10 art teachers' perceptions of educational performance and satisfaction levels along with art teacher training and confidence levels in relation to Internet integration.

Demographic Information

Teaching Grade Levels and Amount of Teaching Experience of Respondents

The teachers who were involved in taking the survey were distributed over all grade levels. K-6 had the largest amount of teachers at 31.74% (F=20) of the 63 teachers responding. The respondents teaching experience was fairly evenly distributed over the various grade levels with a difference in frequency of only 2 teachers.

Internet Access and Weekly Usage

Over 80% of the art teachers involved in the survey had access to the Internet in their classrooms. 19.04% did not

have access to the Internet. More than half (50.77%) of the art teachers use the Internet 6-8 times a week or more. 39.68% listed they used the Internet only 0-2 times a week.

Internet Training

The majority (73.01%) of the survey participants have had some sort of Internet training. 26.98% have never received Internet training.

Teacher Training Sources

More than half (60.31%) of the art teacher respondents have never received training through university classes. Almost 80% have received at least some Internet training through district in-services. Over two-thirds of the teachers have been assisted with Internet operations by a co-worker.

Teacher Internet Integration Sources

Almost three-fourths of the responding art teachers have never received Internet integration training through a university class. District in-services have provided training for almost half of the respondents with about the same percentage trained by co-workers.

Internet Usage Perceptions

The results from art teacher respondents' perceptions of comfort levels when using the Internet for instruction showed a mean score of 3.476. This shows mixed reactions from teachers. Many more teachers agreed that they felt comfortable using the Internet for instructional purposes

than those that did not. Over one-quarter of the respondents did not feel comfortable with this concept.

The results from art teacher respondents' perceptions of their confidence levels in relation to the use of the Internet as an instructional tool showed a mean score of 3.38. This again displayed a wide variety of responses from teachers. Overall, many more teachers (58.72%) had positive perceptions about their confidence levels as compared to (23.80%) those with negative perceptions.

The results from art teacher respondents' perceptions of student satisfaction due to Internet integration showed a mean score of 3.222 and a standard deviation of .94. Again, this showed a wide assortment of responses from participants. The largest art teacher respondent group for any particular answer was undecided if they felt student satisfaction was increased when Internet integration was part of the classroom instruction. 41.26% of the respondents agreed student satisfaction was increased, 22.21% disagreed.

The results from the responding art teachers about their perceptions of teacher satisfaction levels due to Internet integration showed a lower mean score of 2.698, and a standard deviation of .815. The majority of art teachers that answered the survey were undecided if they were more satisfied with lessons that integrate the Internet into their classroom teaching. 28.57% disagreed with this concept and 14.28% agreed.

Differences Between Art Teacher Internet Integration Training Levels

The results of the survey given to art teachers about their perceptions of comfort levels involving the Internet for instruction showed the following differences between teachers with training in Internet instruction and those without training. Only 16.66% of the art teachers with training reported negative feelings toward their comfort levels involving Internet as an instructional tool compared to nearly half of the teachers without training. The percentages of the undecided groups were almost identical with 16.66% for trained and 14.28% for untrained teachers. A larger group of teachers with training (66.66%) perceived themselves more comfortable using the Internet for instruction in their classrooms compared to 42.85% of those teachers without training. The respondents with training had a higher mean score of 3.714 and the group without training had a mean score of 3.

The survey showed the following results for art teacher perceptions about their confidence levels in relation to the use of the Internet as an instructional tool for trained and untrained teachers. More teachers with Internet training (61.90%) felt confident in their ability to effectively use the Internet compared to 52.37% without training. There was a big difference between the groups that were undecided. 23.80% of the trained teachers were undecided and only 4.76%

of the untrained teachers felt undecided about their confidence levels. The teacher respondents from the untrained group had many more negative responses at 42.84% compared to only 14.28% for trained teachers. The teachers with training again had a higher mean score of 3.547 compared to 3.047 for untrained teachers.

The following results show the difference between how trained and untrained teachers perceive student satisfaction levels due to Internet integration. There was a large difference between how the trained undecided teachers (28.57%) feel in regard to student satisfaction compared to untrained teachers at 52.38%. More untrained teachers (33.32%) had negative feelings about student satisfaction. In comparison the trained teachers had a 16.66% negative response rate. The largest difference was in the area of positive feelings. 54.75% of the trained teachers compared to only 14.28% of the untrained teachers had positive feelings.

The comparison of data between the trained and untrained teachers in the area of the art teacher satisfaction showed the following results. 61.89% of the art teachers without training had negative responses about their own satisfaction levels when Internet was incorporated into their teaching compared to 23.80% of trained teachers. More teachers with training (57.14%) were undecided about their satisfaction levels compared to untrained teachers 33.33%.

The results from the surveys returned by teachers about their perceptions of student satisfaction based on teacher confidence levels follows. Of the art teachers who were confident in their ability to use Internet integration 51.21% felt student satisfaction was increased compared to only 11.76% of unconfident teachers. 52.94% of unconfident teachers were undecided compared to 29.26% of confident teachers.

A data comparison of the differences between satisfaction levels of art teachers for confident and not confident teachers showed almost half of the teachers in each group as undecided. 51.93% of the teachers with low confidence in their ability to use Internet integration did not agree teacher satisfaction is increased when using this teaching technique. 34.13% of the teachers with higher confidence disagreed. No one from the teachers in the low confidence group agreed.

Overall, art teacher training and confidence levels had some impact on teacher perceptions of student and teacher satisfaction. Teachers with more Internet integration training and higher levels of confidence in their ability to use the Internet as an instructional tool rated satisfaction levels higher than those without training or lower confidence. In the groups of teachers with more training and higher confidence the percentage of teachers in the undecided

category also consistently went up while the disagree categories went down.

CHAPTER IV

SUMMARY, CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

Introduction

This final chapter contains a review of the study of Cooperative Educational Services Agency 10 art teachers' perceptions of educational performance in relation to Internet integration. The chapter summarizes the purpose of the study, procedures followed in the study, data analysis methods, and limitations found in the study. Results of the study are reviewed and conclusions stated. Educational implications along with recommendations for further research conclude the chapter.

Summary of the Study

The purpose of the study was to describe art teacher Internet integration training and confidence levels as measured by a teacher survey and to describe teacher perceptions of resulting educational performance levels of art students. The study focused on the following objectives:

1. To determine the percentage of art teachers that have received Internet training.
2. To determine the percentage of art teachers that have received Internet integration training.
3. To determine what percentage of art teachers feel confident in their ability to use Internet technology.

4. To determine if integration of the Internet into art classrooms improves teacher satisfaction.
5. To determine if art teachers perceive integration of the Internet into art classrooms as improving student satisfaction.

The instrument for this research project consisted of two parts. The first part of the questionnaire was made up of items that measured demographic information, Internet usage and teacher training. The second part used the Likert scaling procedures and measured teacher perceptions of satisfaction levels using a scoring procedure from 1-5.

On April 24, 2000 the surveys were sent to C.E.S.A. 10 art teachers through the Postal Service. Teachers were asked to return the survey in self-addressed, stamped envelopes by May 8, 2000. 63 of 86 art teachers sent back their surveys resulting in a 73% return rate. Responses were tabulated in June 2000.

Tabulation and analysis of the survey was done using frequency counts and percentages for all items. The Internet usage and perceptions section of the questionnaire also used mean scores and standard deviations in the data analysis as well as the frequency counts and percentages. Additional information was gained by separating and comparing data from teachers with and without Internet training. Also, this same type of comparisons was done for teachers with higher and lower confidence levels.

Research Objective 1: To determine the percentage of art teachers that have received Internet training.

Results of the survey showed that of the C.E.S.A. 10 art teachers that returned the survey 73.01% have received Internet training. The most common form of Internet training was district in-services at 79.35%. Next was training from co-workers at 68.25%. The least used form of training was university classes at 39.68%.

Research Objective 2: To determine the percentage of art teachers that have received Internet integration training.

Again more art teachers that returned the survey received Internet integration training through district in-service than other sources. 55.54% received Internet integration through district in-service and 50.78% have been trained through co-workers. Only 28.57% received Internet integration training through university classes.

Research Objective 3: To determine what percentage of art teachers feel confident in their ability to use Internet technology.

Results show almost half (46.03%) of the responding art teachers agreed they felt confident in their ability to use Internet technology. 12.69% strongly agreed and 46.03% agreed with this objective. 17.46% of the participating teachers were undecided as to their confidence level. 14.28% disagreed with the objective and 9.52% strongly disagreed.

Overall many more teachers felt positive about the objective than negative.

Research Objective 4: To determine if integration of the Internet into art classrooms improves teacher satisfaction.

Nearly half (49.20%) of the art teachers who returned the survey were undecided if their satisfaction level was increased due to Internet integration. 14.28% agreed their satisfaction was increased and 36.50% disagreed.

When dividing the respondents according to teachers with Internet training and those without training the results for the trained group was only slightly higher. 57.14% of the trained teachers were undecided, 19.04% agreed and 23.80% disagreed. But results for untrained teachers are quite different in a negative way. 61.89% of the respondents disagreed, 33.33% were undecided and only 4.76% agreed.

Research Objective 5: To determine if art teachers perceive integration of the Internet into art classrooms as improving student satisfaction.

41.26% of the responding art teachers had a positive reaction to the concept of student satisfaction increasing due to Internet integration. 36.50% were undecided about their perceptions of student satisfaction. 22.21% had negative reactions to the concept.

When dividing the respondents according to teachers with Internet training and those without the results showed a more positive response from the trained teachers. 54.75% of the

trained teachers had positive responses. 28.57% of the trained teachers were undecided and 16.66% had negative responses. For the group of teachers without Internet training only 14.28% had positive responses. 52.38% of untrained teachers were undecided and 33.32% had negative responses.

Conclusions

In this study the survey information showed, overall, that Internet training was related to increased positive perceptions of satisfaction levels by C.E.S.A. 10 art teachers. Internet training also increased the percentage of teachers that were undecided about student and teacher satisfaction levels. Responding teachers with less Internet training were more undecided about student and teachers satisfaction levels. Internet training also had a positive impact on teacher confidence levels. The teachers that stated they had received some type of Internet training displayed a higher rate of positive responses than those without training.

The survey also showed C.E.S.A. 10 art teachers who felt confident in their ability to use the Internet as an instructional tool had higher rates of positive responses in the area of student satisfaction. These teachers also had lower rates of negative responses than those with lower confidence.

There was not a positive relationship between how confident teachers perceived student and teacher satisfaction in their classrooms. Many teachers with lower confidence are still undecided about how they perceived student and teacher satisfaction.

The high undecided response rates could be due to the newness of this form of instructional technology. Teachers seem to need more time to integrate the Internet into educational practice. Hopefully, this integration can be accomplished because technology is now a fact of life and as Greh (1997) states "the future does not belong to the teachers but to the students, and there is reason to hope in them and in their ability to make good use of technology".

Limitations of the Study

The subjects for this study are art teachers of the Cooperative Educational Service Agency (C.E.S.A.) 10, therefore generalizations to other areas or states would be limited.

Sixty-three of 86 surveys were returned and analyzed. If all the surveys would have been returned for inclusion the data analysis results may have been somewhat different. Teachers that are currently using the Internet and have positive feelings about the results they are getting in their classrooms may have been more likely to return the than non-users.

Another limitation of the survey is that because the Internet is a fairly new instructional tool for teachers many have not had an adequate chance to become familiar with it's possibilities and potential. A few schools were still in the process of adding the necessary equipment and wiring to connect individual classrooms to the Internet. Others are just starting to provide some training for their teachers. More time is needed to accurately assess how these teachers will feel about the instructional use of this new technology.

Research Recommendations

Based on this study, several recommendations follow for further research into the area of Internet integration involving art education.

This study only surveyed the participants once. Some respondents stated they were only recently able to access the Internet or have not had the necessary time to research and prepare lessons using the Internet. If a longitudinal study was used teachers would have a number of years to make substantial changes in their teaching as new possibilities of Internet education are introduced and become familiar to them. It is also important that teachers continue to be assessed in the future. Future assessment would identify barriers teachers are encountering as they try to integrate this new and rapidly changing technology. As needs are identified classes or in-services could be designed which

provide training for teachers in problem areas to aid in the effective implementation of Internet integration.

C.E.S.A. 10 was the only area surveyed with this study; consequently, generalizations about teachers in other geographical areas or states is limited. Therefore, further research would need to be conducted in other geographical areas to provide accurate results.

Educational Implications

The Internet is one of the most interesting innovations of the past century in the field of education. The impact the Internet will have on education is only beginning to be revealed. As the Internet continues to change so will potential creative learning opportunities increase for students. "The use of the Internet can challenge students, accommodate individual, cognitive styles of learning, and provide alternatives for differing interests and learning styles" (Heise & Grandgenett, 1996). Students learn according to Dilger & Roland (1993) to "be in control of the technology and responsible for their learning, instead of being passive viewers". These are just a few of the skills that Internet integration can achieve for student's which can assist them in their future career demands.

Internet integration was perceived by many art instructors as increasing the student's satisfaction in what they are learning. Hopefully, if students have increased enjoyment in what they are learning their learning will then

be improved and retained. According to Forrer, 1995 the Internet also helps students develop “problem solving, decision making and judgmental skills” which can only help students throughout their entire lifetimes.

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April 20, 2000

Dear Art Educator,

I am an art teacher presently working toward my Master of Science in Education from the University of Wisconsin – Stout. I am conducting a research study that will examine Internet integration and perceptions of confidence levels by art teachers. The goal of this study is to examine the use of the Internet by C.E.S.A. 10 art teachers through completion of the attached survey instrument.

All data collected in this study will be confidential. No individual will be listed in any respect, and only group data will be analyzed and described. Your participation in this survey is completely voluntary. I would appreciate your completing and returning the survey by May 8 in the enclosed, postage-paid envelope.

NOTE: Questions or concerns about participation in the research or subsequent complaints should be addressed first to the researcher (715)427-3446 or research advisor and second to Dr. Ted Knous, Chair, UW-Stout Institutional Review Board for the Protection of Human Subjects in Research, 11HH, UW-Stout, Menomonie, WI, 54751, phone (715)232-1126.

Thank you for your time and cooperation.

Sincerely,

Mary Lou Czerniak
Medford Elem. Art Teacher

Please check or circle the appropriate response:

1. What grade levels are you currently teaching?
a. PreK-3 b. 4-6 c. 7-8 d. 9-12 e. K-12

2. How many years have you taught art education?
a. 1-5 yrs. b. 6-10 yrs. c. 11-15 yrs. d. 16-20 yrs.
e. 20-25 yrs. f. 25 or more

3. Can you access the Internet in your classroom?
a. yes b. no

4. How many times a week do you use the Internet?
a. never b. 0-2 times c. 6-8 times d. 8-10 times
e. 10 or more times

5. Have you received training in how to use the Internet?
a. yes b. no

6. Please circle the following response that best describes your Internet training:

a. Have you received Internet training from an university course?
1. never 2. some 3. frequently

b. Have you received Internet training from district in-services?
1. never 2. some 3. frequently

c. Have you received Internet training from other teachers?
1. never 2. some 3. frequently

7. Please circle the following response that best describes your Internet integration (Interent use in your art curriculum teaching units) training:

a. Have you received Internet integration training from a university course?
1. never 2. some 3. frequently

b. Have you received Internet integration training from district in-services?
1. never 2. some 3. frequently

c. Have you received Internet integration training from other teachers?
1. never 2. some 3. Frequently

Please circle to what extent you agree or disagree with the following statements.

SD-*Strongly Disagree* D-*Disagree* U-*Undecided*
A-*Agree* SA-*Strongly Agree*

8. I feel comfortable using the Internet in my art classroom for instructional purposes.
SD D U A SA

9. I feel confident in my ability to effectively use the Internet as an instructional tool.
SD D U A SA

10. I feel student satisfaction is increased when Internet integration is part of my classroom instruction.
SD D U A SA

11. I feel more satisfaction with lessons that integrate the Internet as a teaching tool as compared to lessons that do not.
SD D U A SA

THANK YOU FOR YOUR TIME AND COOPERATION

PLEASE MAIL THE SURVEY IN THE ENCLOSED ENVELOPE TO THE FOLLOWING ADDRESS WHEN YOU ARE FINISHED FILLING IT OUT.

Mary Lou Czerniak N7866 Fischer Creek Road Westboro, WI 54490

If you have questions e-mail czernma@usa.net **or czernma@medford.k12.wi.us**